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November 17, 2003

### UTILITY PATENT APPLICATION TRANSMITTAL

Attorney Docket Number:

64517.000002

First Named Inventor:

Masaaki IKEDA et al.

Title

METHODS FOR PROLIFERATING TERMINAL DIFFERENTIATED CELLS

AND RECOMBINANT VECTORS THEREFOR

**TO:** Mail Stop Patent Application

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

Attached are the following for filing with the U.S. Patent and Trademark Office:

| 1. | $\boxtimes$ | Fee Transmittal Form (original and   | duplicate)           |                         |
|----|-------------|--------------------------------------|----------------------|-------------------------|
| 2. |             | Small Entity Status Claimed:         | Ц                    | Independent Inventor    |
|    |             |                                      |                      | Small Business Concern  |
|    |             |                                      |                      | Non-Profit Organization |
|    |             | Statement Enclosed                   |                      | C                       |
|    |             | Statement Filed in Prior Application | n; Status Still Proj | per and Desired         |
| 3. | $\boxtimes$ | Specification - Total Pages:         | 30                   | _ (Including Abstract   |

|                            |           | CLA       | IMS AS FILE | ED                        |           |             |  |
|----------------------------|-----------|-----------|-------------|---------------------------|-----------|-------------|--|
|                            | Claims    | Basic Fee |             | R                         |           |             |  |
|                            | Filed     | Claims    | Extra       | Large Entity Small Entity |           | Amount      |  |
| Total Claims               | 26        | 20        | 6           | \$ 18.00                  | \$ 9.00   | \$ 108.00   |  |
| Independent Claims         | 5         | . 3       | 2           | \$ 86.00                  | \$ 43.00  | \$ 172.00   |  |
| First Presentation of M    | \$ 290.00 | \$ 145.00 | \$ 290.00   |                           |           |             |  |
| <b>BASIC FEE</b> \$ 770.00 |           |           |             |                           | \$ 385.00 | \$ 770.00   |  |
| TOTAL FILING FEE           |           |           |             |                           |           | \$ 1,304.00 |  |
| Assignment Recordation Fee |           |           |             |                           |           | \$ 0.00     |  |
| TOTAL AMOUNT ENCLOSED      |           |           |             |                           |           | \$ 1,340.00 |  |



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| 4. | $\boxtimes$ | Drawii  | ngs   | - Total Sheets: <u>7</u> (Fig(s). <u>1-11c</u> )  |  |  |  |  |  |
|----|-------------|---|---|---|--|--|--|--|--|
| 5. | Oath        | or Decla  | ration  | - Total Pages: <u>3</u>   |  |  |  |  |  |
|    | a.          | <ul><li>Newly executed (original or copy)</li><li>New (unexecuted)</li></ul>                                |   |   |  |  |  |  |  |
|    | b.          |   | Copy from a prior application (for continuation/divisional with Box 18 completed) |   |  |  |  |  |  |
|    |             |   |   | DELETION OF INVENTOR(s): Signed statement attached deleting inventor(s) named in prior application. |  |  |  |  |  |
| 6. |             | Applic  | ation I   | Data Sheet  |  |  |  |  |  |
| 7. |             | CD-ROM or CD-R in duplicate, large table or Microfiche Computer Program (Appendix)                          |   |   |  |  |  |  |  |
| 8. | $\boxtimes$ | Nucleo  |   | and/or Amino Acid Sequence Submission (if applicable, all   |  |  |  |  |  |
|    |             | a.  | $\boxtimes$   | Computer Readable Form (CRF)  |  |  |  |  |  |
|    |             | b.  | $\boxtimes$   | Specification Sequence Listing on:  |  |  |  |  |  |
|    |             |   | i.  | CD-ROM or CD-R (two copies); or   |  |  |  |  |  |
|    |             |   | ii.   | Paper Copy  |  |  |  |  |  |
|    |             | c.  | $\boxtimes$   | Statements verifying identity of above copies   |  |  |  |  |  |
| 9. | $\boxtimes$ | Assignee/Applicant:  BANYU PHARMACEUTICAL CO., LTD.  2-3, Nihombashi Honcho 2-chome Chuo-ku, Tokyo 103-8416 |   |   |  |  |  |  |  |
|    |             | Assign  | ee of R   | Record in Prior Application No.::   |  |  |  |  |  |
|    |             | recorde   | ed on _   | at Reel, Frame  |  |  |  |  |  |



**\** 

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| 10. |             | 37 C.F.R. 3.73(b) Statement  Power of Attorney   |  |  |  |  |  |  |
|-----|-------------|--|--|--|--|--|--|--|
| 11. |             | English Translation Document (if applicable)   |  |  |  |  |  |  |
| 12. |             | Information Disclosure Statement with PTO-1449 and References  |  |  |  |  |  |  |
|     |             | Copies of Information Disclosure Statement Citations   |  |  |  |  |  |  |
| 13. |             | Preliminary Amendment  |  |  |  |  |  |  |
| 14. | $\boxtimes$ | Return Receipt Postcard  |  |  |  |  |  |  |
| 15. | $\boxtimes$ | Priority is Claimed as Follows: <u>International Application No. PCT/JP01/08208, filed September 21, 2001</u> <u>Japanese Patent Application No. 2001-148266, filed May 17, 2001</u>   |  |  |  |  |  |  |
|     |             |  |  |  |  |  |  |  |
|     |             | Claim Benefit of the Following U.S. Provisional Application No(s).:  |  |  |  |  |  |  |
|     |             |  |  |  |  |  |  |  |
|     |             | If Foreign Priority is Claimed, Certified Copy of the Above Priority Document(s) is Submitted Herewith   |  |  |  |  |  |  |
| 16. |             | Nonpublication Request under 35 U.S.C. § 1222(b)(2)(B)(i). Applicant must attach Form PTO/SB/35 or its equivalent.   |  |  |  |  |  |  |
| 17. |             | Other:   |  |  |  |  |  |  |
| 18. | $\boxtimes$ | Continuation Divisional Continuation-in-Part of Frior Application No.: PCT/JP01/08208 filed September 21, 2001   |  |  |  |  |  |  |
|     |             | Prior application information: Examiner  |  |  |  |  |  |  |
|     |             | Group Art Unit   |  |  |  |  |  |  |
| *   |             | Incorporation By Reference (useable if Box 5b is marked) The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 5b, is considered as being part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application papers. |  |  |  |  |  |  |

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|     |                                       | Complete Application Based on Provisional Application No.:   |  |  |  |  |  |  |
|-----|---------------------------------------|--|--|--|--|--|--|--|
| 19. | Please address all correspondence to: |  |  |  |  |  |  |  |
|     | $\boxtimes$                           | CUSTOMER NUMBER 21967  |  |  |  |  |  |  |
|     |                                       | Robert M. Schulman Intellectual Property Department Hunton & Williams 1900 K Street, N.W. Suite 1200 Washington, DC 20006-1109 |  |  |  |  |  |  |

20. A new power of attorney or authorization of agent (PTO/SB/81) is as follows:

The power of attorney is to: Stanislaus Aksman, Reg. No. 28,562; Jennifer A. Albert, Reg. No. 32,012; Thomas E. Anderson, Reg. No. 37,063; David E. Baker, Reg. No. 42,285; Scott D. Balderston, Reg. No. 35,436; Carl L. Benson, Reg. No. 38,378; Thomas Blasey, Reg. No. 33,475; Bradford Blaise, Reg. No. 47,429; Thomas D. Bradshaw, Reg. No. 51,492; J. Robert Brown, Jr., Reg. No. 45.438; Tyler S. Brown, Reg. No. 36,465; Brian M. Buroker, Reg. No. 39,125; Christopher C. Campbell, Reg. No. 37,291; Katherine S. Chang, Reg. No. 40,544; Robin C. Clark, Reg. No. 40,956; Trevor Q. Coddington, Reg. No. 46,633; Christopher J. Cuneo, Reg. No. 42,450; Ryan S. Davidson, Reg. No. 51,596; Patrick A. Doody, Reg. No. 35,022; Dinnatia J. Doster, Reg. No. 45,268; Kevin T. Duncan, Reg. No. 41,495; Kevin J. Dunleavy, Reg. No. 32,024; David D'Zurilla, Reg. No. 36,776; Ozzie A. Farres, Reg. No. 43,606; Nancy J. Flint, Reg. No. 46,704; Christopher J. Forstner, Reg. No. 46,049; James G. Gatto, Reg. No. 32,694; George Georgellis, Reg. No. 43,632; Charles F. Hollis, III, Reg. No. 40,650; David M. Huntley, Reg. No. 40,309; Nancy J. Jensen, Reg. No. 45,913; Herbert V. Kerner, Reg. No. 42,721; Steven P. Klocinski, Reg. No. 39,251; Robert C. Lampe, III, Reg. No. 51,914; Charles B. Lobsenz, Reg. No. 37,857; Tyler Maddry, Reg. No. 40,074; J. Michael Martinez, Reg. No. 37,178; David H. Milligan, Reg. No. 42,893; James R. Miner, Reg. No. 40,444; Bryan F. Moore, Reg. No. 52,044; Devin S. Morgan, Reg. No. 45,562; Kerry H. Owens, Reg. No. 37,412; Jeffrey T. Perez, Reg. No. 52,110; Michael P.F. Phelps, Reg. No. 48,654; John P. Pinkerton, Reg. No. 28,746; Laurence H. Posorske, Reg. No. 34,698; Matthew J. Pryor, Reg. No. 45,278; Andrew J. Ririe, Reg. No. 45,597; Stephen T. Schreiner, Reg. No. 43,097; Robert M. Schulman, Reg. No. 31,196; Thomas J. Scott, Jr., Reg. No. 27,836; Yisun Song, Reg. No. 44,487; Shelley L. Spalding, Reg. No. 51,971; Henry C. Su, Reg. No. 37,738; Rodger L. Tate, Reg. No. 27,399; Raphael A.

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Valencia, Reg. No. 43,216; René Vazquez, Reg. No. 38,647; Samson Vermont, Reg. No. 42,202; Robert J. Ward, Reg. No. 28,746; and Scott F. Yarnell, Reg. No. 45,245.

- Please remove as power of attorney: Scott D. Balderston, Reg. No. 35,436; Thomas Blasey, Reg. No. 33,475; Bradford Blaise, Reg. No. 47,429; Tyler S. Brown, Reg. No. 36,465; Dinnatia J. Doster, Reg. No. 45,268; Kevin J. Dunleavy, Reg. No. 32,024; David D'Zurilla, Reg. No. 36,776; James G. Gatto, Reg. No. 32,694; George Georgellis, Reg. No. 43,632; David M. Huntley, Reg. No. 40,309; Steven P. Klocinski, Reg. No. 39,251; Jonathan D. Link, Reg. No. 41,548; Charles B. Lobsenz, Reg. No. 37,857; Devin S. Morgan, Reg. No. 45,562; Kerry H. Owens, Reg. No. 37,412; Matthew J. Pryor, Reg. No. 45,278; Stuart I. Smith, Reg. No. 42,159; Henry C. Su, Reg. No. 37,738; Raphael A. Valencia, Reg. No. 43,216; and René Vazquez, Reg. No. 38,647.
- $\boxtimes$ Please add as power of attorney: Stanislaus Aksman, Reg. No. 28,562; Jennifer A. Albert, Reg. No. 32,012; Thomas E. Anderson, Reg. No. 37,063; David E. Baker, Reg. No. 42,285; Carl L. Benson, Reg. No. 38,378; Thomas, D. Bradshaw, Reg. No. 51,492; J. Robert Brown, Jr., Reg. No. 45,438; Brian M. Buroker, Reg. No. 39,125; Christopher C. Campbell, Reg. No. 37,291; Katherine S. Chang, Reg. No. 40,544; Robin C. Clark, Reg. No. 40,956; Trevor Q. Coddington, Reg. No. 46,633; Christopher J. Cuneo, Reg. No. 42,450; Ryan S. Davidson, Reg. No. 51,596; Patrick A. Doody, Reg. No. 35,022; Kevin T. Duncan, Reg. No. 41,495; Ozzie A. Farres, Reg. No. 43,606; Nancy J. Flint, Reg. No. 46,704; Christopher J. Forstner, Reg. No. 46,049; Charles F. Hollis, III, Reg. No. 40,650; Nancy J. Jensen, Reg. No. 45,913; Herbert V. Kerner, Reg. No. 42,721; Robert C. Lampe, III, Reg. No. 51,914; Tyler Maddry, Reg. No. 40,074; J. Michael Martinez, Reg. No. 37,178; David H. Milligan, Reg. No. 42,893; James R. Miner, Reg. No. 40,444; Bryan F. Moore, Reg. No. 52,044; Jeffrey T. Perez, Reg. No. 52,110; Michael P.F. Phelps, Reg. No. 48,654; John P. Pinkerton, Reg. No. 28,746; Laurence H. Posorske, Reg. No. 34,698; Andrew J. Ririe, Reg. No. 45,597; Stephen T. Schreiner, Reg. No. 43,097; Robert M. Schulman, Reg. No. 31,196; Thomas J. Scott, Jr., Reg. No. 27,836; Yisun Song, Reg. No. 44,487; Shelley L. Spalding, Reg. No. 51,971; Rodger L. Tate, Reg. No. 27,399; Samson Vermont, Reg. No. 42,202; Robert J. Ward, Reg. No. 28,746; and Scott F. Yarnell, Reg. No. 45,245.
- 21. A check in the amount of \$ 856.00 is enclosed. In the event any variance exists between the amount enclosed and the Patent Office charges, please charge or credit any such variance to Deposit Account No. 50-0206.

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The U.S. Patent and Trademark Office is hereby authorized to charge any variance between the amount enclosed and the Patent Office charges to **Deposit Account No. 50-0206**.

Respectfully submitted,

By:

Robert M. Schulman Registration No. 31,196

Jeffrey T. Perez

Registration No. 52,110

RMS/JTP/cbt Enclosures

|                                      |   |                                       |  |   | Complete If Known      |                |                   |                |        |  |  |
|--------------------------------------|---|---------------------------------------|--|---|------------------------|----------------|-------------------|----------------|--------|--|--|
| FEE TR                               | Application No.                         |                                       |  |   | To Be As               | To Be Assigned |                   |                |        |  |  |
|                                      | Filing Date                             |                                       |  |   | November 17, 2003      |                |                   |                |        |  |  |
| BOX PATEN                            | First Named Inventor                    |                                       |  |   | Masaaki                | Masaaki IKEDA  |                   |                |        |  |  |
|                                      |   | Examiner Name                         |  |   |                        | To Be As       | To Be Assigned    |                |        |  |  |
|                                      |   |                                       | Gro  | up Ar   | t Unit                 |                | To Be As          | To Be Assigned |        |  |  |
| Total Amount Of Paymen               | t (\$) <b>1,340.0</b> 0                 | 0                                     | Atto   | rney  | Docket                 | No.            | 64517.00          | 00002          |        |  |  |
| METHOD OF PA                         | AYMENT (check                           | one)                                  |  |   | FEE C                  | ALCUL          | ATION (con        | tinued         | )      |  |  |
|                                      | the United States                       |                                       | 3. ADDITIONAL FEES                               |   |                        |                |                   |                |        |  |  |
|                                      | ce is hereby auth<br>ed fees and credit |                                       | Fee Description                                  |   |                        |                |                   | Fee            | Paid   |  |  |
|                                      | eposit Account N                        |                                       | Surcharge - late filing fee or oath              |   |                        |                |                   |                |        |  |  |
| in the name of                       | Hunton & William                        | S.                                    |  |   | harge - lat<br>r sheet | te provisio    | nal filing fee or | \$             |        |  |  |
|                                      |   |                                       |  |   | -Month E               | Extension      | of Time           | \$             |        |  |  |
|                                      |   |                                       |  | Notic   | e of Appe              | al             |                   | \$             |        |  |  |
|                                      |   |                                       |  | Filing  | g Brief in S           | Support of     | Appeal            | \$             |        |  |  |
|                                      | d. The Director of                      |                                       |  | Requ  | est for Or             | al Hearing     | ı                 | \$             |        |  |  |
|                                      | ind Trademark Of<br>harge any variand   |                                       |  | Utility Issue Fee (or Reissue) (including \$ Publication Fee, if necessary) |                        |                |                   |                |        |  |  |
|                                      | closed and the Pa                       |                                       | Design Issue Fee                                 |   |                        |                |                   | \$             |        |  |  |
| the name of Hu                       | ınton & Williams,                       | 1900 K                                |  | Plant   | t Issue Fe             | \$             |                   |                |        |  |  |
| Street, N.W., S<br>20006-1109.       | uite 1200, Washii                       | ngton, D.C.                           |  | Petiti  | ion to Con             | \$             |                   |                |        |  |  |
| 20006-1109.                          |   |                                       | ☐ Petition to Revive (Unavoidable)               |   |                        |                |                   | \$             |        |  |  |
|                                      |   |                                       | Petition to Revive (Unintentional)               |   |                        |                |                   |                |        |  |  |
| FEE C                                | ALCULATION                              |                                       | Petitions Related to Provisional Applications    |   |                        |                |                   | \$             |        |  |  |
| 1. BASIC FILING FEE                  | Large Entity                            | Small Entity                          | Submission of Information Disclosure Statement   |   |                        |                |                   |                |        |  |  |
|                                      |   | FEE PAID                              | ☐ Filing Submission After Final Rejection        |   |                        |                |                   |                |        |  |  |
| Utility Filing Fe<br>Design Filing F |   | 770.00                                | Recording Each Patent Assignment Per \$ Property |   |                        |                |                   |                |        |  |  |
| Plant Filing Fee                     | \$                                      |                                       |  | Filing  | g Request              | for Reexa      | mination          | nation \$      |        |  |  |
| Reissue Filing<br>Provisional Filir  |   |                                       | Other (specify)                                  |   |                        |                |                   | \$             |        |  |  |
| 2. EXTRA CLAIMS FEES                 |   |                                       |  |   |                        |                |                   |                |        |  |  |
|                                      |   | CLAIMS AS A                           | AMEN   | DED   |                        |                |                   |                | ·      |  |  |
|                                      | r ·                                     | · · · · · · · · · · · · · · · · · · · |  |   |                        |                |                   |                |        |  |  |
| For Number Prese TOTAL CLAIMS 26     |   | Paid For                              | $\dashv$   | xtra  | Large                  |                | Small Entity      | <b>├</b> ──    | \mount |  |  |
| TOTAL CLAIMS  INDEPENDENT CLAIMS     | 3                                       |                                       | 6  |   | 3.00                   | x \$ 9.00      | \$                | 108.00         |        |  |  |
| MULTIPLE DEPENDENT CI                |   | 2                                     |  | 6.00  | x \$ 4300<br>\$ 145.00 | \$             | 172.00<br>290.00  |                |        |  |  |
| TOTAL EXTRA CLAIMS FE                | \$ 290.00   \$ 14                       |                                       |  | φ 145.00  | \$                     | 570.00         |                   |                |        |  |  |
| SUBMITTED BY                         |   | -                                     |  | <u> </u>  | Complet                | <u> </u>       |                   |                |        |  |  |
| Typed or Printed Name Je             |   |                                       |  | 52,110  |                        |                |                   |                |        |  |  |
| Signature                            | Date November 17, 2003                  |                                       |  |   | 3                      |                |                   |                |        |  |  |
|                                      | <del>//-//</del>                        | · · · · · · · · · · · · · · · · · · · | <del>)                                    </del> |   |                        |                | L                 |                |        |  |  |